

REMARKS

The Specification is amended to correct the misspelling noted by the Examiner.

In the Office Action, the Examiner rejected Claims 1-3, 8-13, and 16-20 as anticipated by the Hashimoto U.S. Patent 5,931,905. In the TV mail system of the Hashimoto patent (see Fig. 1), a Center Response Server 30 receives email sent to a user's email address and places it in the Receiver Mail Box 36 from which a Mail Distribution Program routes it to the user's Mail Box 37. A Mail Transfer Program 33 of the Center Response Server 30 communicates with a Local Response Server 20 which operates a Client Program 22 that communicates with the Program Controller 12 of an Interactive Television Unit 10 for displaying email to the user on the TV screen. As noted in Col. 12, Lines 1-12, the Mail Transfer Program 33 takes the email from the Mail Box 37 addressed to the intended user and generates "mail data" (see Fig. 12) which is sent to the Local Response Server to provide to the TV Unit 10.

Hashimoto provides two versions of a spam rejection function for the TV mail system. In one version, a user of the TV mail system must subscribe to be registered on an "authorized sender list" (Col. 12, Lines 42-50). The authorized sender list is sent to the Central Response Server 30 which uses it to reject unauthorized email. When the Mail Distribution Program 39 has generated the mail data, it requests the Name Analysis Server Program 38 to determine if the sender ID is on the authorized sender list, and if it is not, then "present mail data is abolished and abolition is notified to the sender" (Col. 12, Lines 62-67, and Col. 13, Lines 1-4). In the other version, the user provides a "rejected sender list" which the Central Response Server 30 uses to reject unauthorized email. Similarly, when the mail Distribution Program 39 has received the mail data, it requests the Name Analysis Server Program 38 to determine if the sender ID is on the rejected sender list. If the sender ID is on the "rejected sender list", then "present mail data is abolished and abolition is notified to the sender" (Col. 13, Lines 16-22).

In both versions of the Hashimoto spam rejection function, the Central Response Server 30 first receives the email and places it in the Receiver Mail Box 36 and Distributes it to the user's Mail Box 37 and then operates the Mail Transfer Program 36 to generate the "mail

data” identifying the mail received. Only when the mail data identifying the mail received are generated, then the system determines if the sender ID is accepted or not, and if it is not, the email is deleted (“abolished”) and the sender is notified, presumably with a message or return email that their email was rejected.

In the present invention, the Redirector and Authorized Sender List (ASL) are operated with standard email server (SMTP) server functions to reject the email before it is allowed to be received by the email-receiving server. As explained on Page 6, in the 2nd Paragraph of the Specification, the standard email-receiving server first establishes a connection with an email-sending server requesting to send an email, and pre-processes the request by performing certain administrative functions, such as checking the recipient’s ID to see if it is a user handled by the mail server. In the present invention, the Redirector and ASL intervene in the pre-processing function to have the email-receiving server reject receipt of email that is not from an authorized sender. The Redirector rejects the email by causing a standard mail server error message to be sent by the receiving server to the sending server that the user noted in the request to send email message does not exist or that the receiving server is not authorized to accept the email (see Page 8, Lines 16-17, Page 11, Line 29, Page 13, Lines 28-30). When the spammer’s server receives a server error message that the receiving server will not accept the email addressed to the user, it is deterred from sending further spam emails because it will similarly be automatically rejected by the receiving server (spammer programs process such error messages by updating their list of addresses). In contrast, the Hashimoto Central Response Server receives the email into the Receiver Mail Box first, then processes it to see if it is from an authorized sender. If it is not, the email is deleted, and a reject message is sent to the sender. Thus, the rejection is not automatically accomplished at the server level as in the present invention, and the spammer may not be deterred from sending further spam emails, particularly if it uses an automated computer program that continues to send spam to all addresses on its list of supposedly valid addresses.

Independent Claims 1, 13, and 18 are now amended to define that the email rejection module (Redirector) and the sender list module operate by intervening when a request to send email message is received from an email-sending server and enabling the email-receiving

server to send an error message back to the email-sending server that the email sent under the rejected email address of the sender is not accepted by email-receiving server. The previous claim component of “email client” is deleted as unnecessary and to make it clear that the claimed invention is operable at the server level, as noted above. The recitation of the ASL is changed to more broadly recite the “sender list module” for comparing sender email addresses provided by the user to distinguish email to be accepted from email to be rejected. This would include the various list processing rules, including “always accept”, “always reject”, “suspect”, etc., as described in the Specification (Page 13, Lines 29-31, Claim 12).

Claims 2, 3, 16, 17, 19 and 20 are amended consistent with the amendments to the main claims and specifically recite the authorized sender list (ASL).

All amendments are thus deemed to be fully supported by the original Specification, and no new matter is deemed to be added. All claims are deemed to distinguish over the Hashimoto reference which does not employ an email rejection module and sender list module to intervene on a request to send email by the email-sending server and to reject email at the server level by sending an “email not accepted” error message back to the sending server, in order to more assuredly deter the spammer from sending further spam.

Moreover, depending Claims 8-10 and 16 define the ASL updating function wherein approved sender addresses identified from email sent by the user or from email in which the sender has validated themselves in the WBM test are added to the ASL. This function is not described or suggested in the Hashimoto reference. In the portion cited by the Examiner, the Name Analysis Client Program 25 in Fig. 17 does not perform an ASL name addition function; rather, it is used to acquire the name and address of the sender corresponding to the sender ID (email address) so that the recipient’s Mail Routing Program 24 can generate a display of receiving mail data for the recipient (Col. 15, Lines 21-63).

Depending Claims 11 and 17 define the ASL updating function wherein various analysis rules are used to analyze the record of email received and/or sent to better inform the ASL which sender names can be assuredly added to the ASL. The Examiner notes the

Applicant's statement of prior art that "all email systems ... maintain a log of email ... sent and received", and combines this with Hashimoto's supposed name analysis to reject these claims. However, as noted above, the Examiner's reliance on Hashimoto's name analysis is misplaced, since Hashimoto uses name analysis to display the sender name and address to the recipient, not to evaluate additions to the ASL.

The Examiner also rejected Claims 4-7, 14, and 15 on the basis of the teaching by Hashimoto of the TV email system combined with the Lillibridge U.S. Patent 6,195,698 teaching the use of a riddle or test in order to deter access by an automated agent on a client computer to a server. However, as noted above, the Hashimoto spam rejection function only results in deletion of the email and sending a reject message to the sender. Hashimoto does not suggest automatic rejection of spam email by sending an "email not accepted" error message at the server level. Moreover, Hashimoto does not suggest sending an email to the sender inviting the sender to validate themselves to be added to the ASL by taking a human-only answerable test. Thus, Hashimoto cannot be combined with Lillibridge to obviate these claims.

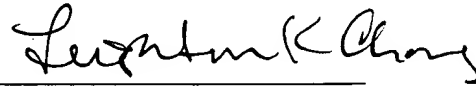
In summary, Claims 1-20 as amended are deemed to be patentably distinct over the cited prior art and in condition for allowance, and it is requested that a Notice of Allowance be issued therefor upon reconsideration.

This response is filed with a certificate of mailing within the time allowed for response, and with total and independent claims after amendment numbering within the limits originally paid for with the filing fee. However, if any fees are deemed to be due for acceptance of this response, authorization is hereby given to charge our Deposit Account No. 502633.

CERTIFICATE OF MAILING:

The undersigned certifies that the foregoing is being mailed on February 10, 2004, by depositing it with the U.S. Postal Service, first class postage paid, addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Respectfully submitted,
ATTORNEYS FOR APPLICANT

A handwritten signature in cursive script, reading "Leighton K. Chong". The signature is written in black ink and is positioned above a horizontal line.

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AMENDMENT OF SPECIFICATION

In the paragraph beginning on page 14, line 5:

B1 In **FIG. 8**, a schematic diagram illustrates the structure and operation of the ASL Manager, previously described as component 211 with respect to **FIG. 2**. The ASL Manager preferably is structured to have an ASL On-Demand Processor 801 and an ASL Scheduler Processor 802, both of which interact with an ASL Rules Processor 803, which also exchanges data with the Spam Processor Database (SPDB) 203a. Email addresses sent to and received from the SMTP Send Manager 212 and SMTP Receive Manager 208 are processed by the ASL On-Demand Processor 801 which executes the appropriate rules in conjunction with the ASL Rules Processor 803. Content from a variety of other sources, including compatible ~~third~~ third party plug-ins, can also be processed to create, populate, and update the ASL Lists stored in the SPDB 203a. For example, content may be received from a "Drag and Drop Manager" for conveniently handling user address inputs while working with the email client, user address inputs from Web sites while working with an associated browser, addresses added by the user to a desktop contact manager, such as the Microsoft Outlook™ Address Book, or other contact lists, and other address inputs generated by third party software that can operate with the user's client programs.

AMENDMENT OF CLAIMS

(Claim 1, amended)

B2
1. A system for eliminating unauthorized email sent to a user on a network comprising:

(a) ~~an email client for allowing the user to receive email sent on the network addressed to a unique email address of the user,~~

~~_____ (b) an email-receiving server connected between to the network and the email client for receiving email a request from an email-sending server on the network to send email~~ addressed to ~~an the~~ unique email address of ~~the a~~ user subscribing to the email-receiving server, said email-receiving server having an ~~authorized~~ senders list (ASL) module which ~~maintains an ASL~~ compares a list of email addresses of senders provided by the user authorized to send email to the user for distinguishing email sent to the user which are to be accepted from those to be rejected, and

(e) ~~(b)~~ an email rejection module operable with the ~~ASL~~ senders list module for rejecting the receipt of email addressed to the email address of the user if ~~the email address of the sender is not one that is maintained on the ASL list by returning an error message to the sender by~~ enabling the email-receiving server to send an error message back to the email-sending server that the email sent under the rejected email address of the sender is not accepted by the email-receiving server.

(Claim 2, amended)

2. A system according to Claim 1, wherein the senders list module is an authorized senders list (ASL) module that includes an ASL database for storing ASL lists of authorized sender addresses for respective subscribers of the system, a spam processor module for checking the ASL lists for matches, and an ASL manager for creating, maintaining, and updating the ASL lists.

(Claim 3, amended)

3. A system according to Claim 2, ~~further comprising wherein the email rejection module includes~~ a redirector module operable with the ASL module for receiving ~~an email-sending request to send email~~ message designating the sender's FROM address and intended recipient's TO

address, for sending a request for validation to the spam processor module to determine whether the sender's FROM address matches any authorized sender address maintained on the ASL list corresponding to the TO address of the intended recipient, for accepting the email if a match to an authorized sender address is found, and for rejecting the email if no match to an authorized sender address is found on the ASL list.

(Claim 4, original)

B²
4. A system according to Claim 3, further comprising a web-based messaging (WBM) module to which email rejected by the redirector module is redirected and which sends a message to the address of the sender of the rejected email notifying the sender to confirm that the sender is a legitimate sender of email to the intended recipient.

(Claim 5, original)

5. A system according to Claim 4, wherein the WBM module includes a separate web site to which the notified sender can log on and confirm that the sender is a legitimate sender of email through an interaction procedure which can only be performed by a human.

(Claim 6, original)

6. A system according to Claim 5, wherein the interaction procedure includes a display of a graphic image of a word in a non-standard font, and an input for the sender to enter in a word corresponding to the graphic image of the word, whereby the system can confirm that the interaction procedure is not performed by a mechanical program.

(Claim 7, original)

7. A system according to Claim 4, wherein once the sender is confirmed as a legitimate sender of email to the intended recipient user, the WBM module sends the email to the user's email box with a code that indicates that the email was rejected by the redirector module but confirmed as legitimate by the WBM module.

(Claim 8, original)

8. A system according to Claim 3, further comprising an email-receiving manager for

capturing FROM and TO addresses of email accepted by the redirector module and sending the data to the ASL manager for later analysis.

(Claim 9, original)

9. A system according to Claim 2, further comprising an email-sending manager for capturing FROM and TO addresses of email sent from the email client and sending the data to the ASL manager for later analysis.

B²
(Claim 10, original)

10. A system according to Claim 2, wherein the ASL manager further includes a rules processor for processing predefined address capture rules for updating the ASL lists using data from an email address source selected from the group of email address sources consisting of: received email; sent email; user inputs to email service functions on the email client; inputs from user browsing of web sites; user desktop organizer and other contact lists; and third party address program inputs.

(Claim 11, original)

11. A system according to Claim 2, wherein the ASL manager further comprises a rules processor for processing predefined analysis rules for updating the ASL lists using data from an analysis source selected from the group of analysis sources consisting of: user email log analysis; expiration date analysis; low/high email volume analysis; fuzzy logic analysis; and third party data analysis.

(Claim 12, original)

12. A system according to Claim 2, wherein the ASL manager maintains the ASL lists designating a sender-address status selected from the group of sender-address statuses consisting of: always authorized as a friend; authorized as a friend over a date range; authorized as a friend before an expiration date; always rejected as a spammer; rejected as a spammer matching a black list; and rejected as a spammer sent with an error message.

(Claim 13, amended)

13. A method for eliminating unauthorized email sent to a user on a network comprising the steps of:

(a) receiving enabling an email-receiving server on the network to receive a request from an email-sending server on the network to send email addressed to the an unique email address of the a user subscribing to the email-receiving server,

(b) maintaining at the email-receiving server an authorized senders list module which compares a list (ASL-list) of sender email addresses of external users authorized to send email to provided by the user for distinguishing email sent to the user which are to be accepted from those to be rejected, and

(c) rejecting the receipt of email sent to the email address of the user if the email address of the sender is not one maintained on the ASL list by returning an error message to the sender under a rejected sender email address by enabling the email-receiving server to send an error message back to the email-sending server that the email sent under the rejected sender email address is not accepted by the email-receiving server.

(Claim 14, original)

14. A method according to Claim 13, further comprising the step of redirecting the rejected email to a web site for sending a message to the sender of the rejected email notifying the sender to confirm that the sender is a legitimate sender of email to the intended recipient.

(Claim 15, original)

15. A method according to Claim 14, further comprising the step of performing an interaction procedure at the web site with the notified sender which can only be performed by a human.

(Claim 16, amended)

16. A method according to Claim 13, wherein said ASL senders list module maintaining step includes updating the authorized senders lists (ASL lists) using data captured from any of the following sources: received email; sent email; user inputs to email service functions; inputs from user browsing of web sites; user desktop organizer and other contact lists; and third party address program inputs.

(Claim 17, amended)

17. A method according to Claim 13, wherein said ASL senders list module maintaining step includes updating the ASL lists using data obtained from analysis of any of the following factors: user email log analysis; expiration date analysis; low/high email volume analysis; fuzzy logic analysis; and third party data analysis.

B²
(Claim 18, amended)

18. An email-receiving server system for eliminating unauthorized email sent via a network ~~to the server~~ addressed to a unique email address for a user of the email-receiving server system comprising:

(a) email pre-processing means for receiving a request from an email-sending server on the network to send email addressed to the user's email address;

(b) an ~~authorized~~ senders list (ASL) module operable with the email pre-processing means which compares maintains an ASL list of email addresses of senders authorized to send email to provided by the user for distinguishing email sent to the user which are to be accepted from those to be rejected, and

(b) (c) an email rejection module operable with the ASL senders list module for rejecting the receipt of email addressed to the email address of the user if the email address of the sender is not one that is maintained on the ASL list by returning an error message to the sender under a rejected sender email address by enabling the email pre-processing means to send an error message back to the email-sending server that the email sent under the rejected sender email address is not accepted by the email-receiving server system.

(Claim 19, amended)

19. An email server system according to Claim 19, wherein the senders list module is an ASL module that includes an ASL database for storing ASL lists of authorized sender addresses for respective subscribers of the system, a spam processor module for checking the ASL lists for matches, and an ASL manager for creating, maintaining, and updating the ASL lists.

(Claim 20, amended)

B2 20. An email server system according to Claim 19, ~~further comprising~~ wherein the email rejection module includes a redirector module operable with the ASL module for receiving an ~~email sending request to send email~~ message designating the sender's FROM address and intended recipient's TO address, for sending a request for validation to the spam processor module to determine whether the sender's FROM address matches any authorized sender address maintained on the ASL list corresponding to the TO address of the intended recipient, for accepting the email if a match to an authorized sender address is found, and for rejecting the email if no match to an authorized sender address is found on the ASL list.
